The experience of regret and disappointment

Zeelenberg, M.; van Dijk, W.W.; Manstead, A.S.R.

Published in:
Cognition and Emotion

Publication date:
1998

COGNITION AND EMOTION, 1998, *12* (2), 221–230

The Experience of Regret and Disappointment

Marcel Zeelenberg, Wilco W. van Dijk, Antony S.R. Manstead, and Joop van der Pligt

University of Amsterdam, The Netherlands

Regret and disappointment have in common the fact that they are experienced when the outcome of a decision is unfavourable: They both concern "what might have been", had things been different. However, some regret and disappointment theorists regard the differences between these emotions as important, arguing that they differ with respect to the conditions under which they are felt, and how they affect decision making. The goal of the present research was to examine whether and how these emotions also differ with respect to the way in which they are experienced. Participants were asked to recall an instance of intense regret or disappointment and to indicate what they felt, thought, felt like doing, did, and were motivated to do during this experience (cf. Roseman, Wiest, & Swartz, 1994). Significant differences between regret and disappointment were found in every category. These differences were most pronounced for "action tendencies" (what participants felt like doing) and "emotivations" (what they were motivated to do). These results suggest that the two emotions have differential implications for future behaviour.

INTRODUCTION

Intense negative emotions are often caused by the outcome of an important decision. For example, one might feel miserable after buying a car that turns out to have many faults, or after commencing a relationship that does not live up to expectations. The same sorts of emotions, but perhaps less intense, can be felt on a more everyday basis, for example, following a purchase of a consumer good that happens to be on sale at a reduced price one week later, or when going to the cinema and seeing a dreadful movie. Two emotions that are frequently experienced in these situations are regret and disappointment.

Requests for reprints should be sent to Dr Marcel Zeelenberg, Department of Business Adminstration, Tilburg University, 5000 LE Tilberg, The Netherlands. Email: M.Zeelenberg@kub.nl.

We thank W. Gerrod Parrott, and two anonymous reviewers for their helpful comments on an earlier version of this article.

Regret and disappointment are common experiences, well known to most, if not all, of us. Disappointment is one of the most frequently experienced emotions after failure on a task (Weiner, Russel, & Lerman, 1979). Regret was found to be the second most frequently named emotion in a study of the use of emotions in everyday language (Shimanoff, 1984). Because of their commonness and their relation to decision making, these emotions have been studied extensively by researchers in the fields of social cognition and behavioural decision making (e.g. Gilovich & Medvec, 1995; Kelsey & Schepanski, 1991; van Dijk & van der Pligt, 1997; Zeelenberg, Beattie, van der Pligt, & de Vries, 1996; for a review, see Zeelenberg, 1996).

Bad Decisions and Disconfirmed Expectancies

Despite the resemblance between regret and disappointment, theorists in decision research find it meaningful and worthwhile to distinguish between them. In regret and disappointment theories (e.g. Bell, 1982, 1985; Loomes & Sugden, 1982, 1986) it is assumed that people anticipate emotions and take them into account when making decisions.

According to regret and disappointment theories, regret arises from comparing an obtained outcome with a better outcome that might have occurred had a different choice been made; that is, regret stems from bad decisions. Disappointment arises from comparing an obtained outcome with a better outcome that might have resulted from the same choice being made; that is, disappointment stems from disconfirmed expectancies. These alternative outcomes may be real, or construed by the process of thinking counterfactually (cf. Landman, 1993). The different antecedent conditions for regret and disappointment are elegantly captured by Landman (1993, p. 47) in the following quotation: "The child is *disappointed* when the Tooth Fairy forgets his third lost tooth. The child's parents *regret* the lapse" (italics in the original). The difference between regret and disappointment, as stressed by decision researchers, therefore resides in the conditions giving rise to the emotions.

The question of whether regret and disappointment also differ with respect to experiential content is one that is difficult to answer, given the scarcity of empirical evidence addressing this question. The primary purpose of the present research is to conduct such a study. The main question to be addressed is as follows: Are regret and disappointment essentially similar experiences that go by a different name, or are they two distinct emotions, each with its own characteristics?

We know of only one published study in which experiences of regret and disappointment were compared. Frijda, Kuipers, and ter Schure (1989, study 2) studied the extent to which 32 emotions could be differentiated

on the basis of measures of appraisals and emotion action readiness. They found that regret and disappointment differed with respect to one appraisal item, "self-agency", and one emotional action readiness item, "attending". Self-agency was measured by means of the question: "Were you responsible for what happened or had happened?", and regret scored higher on this item than did disappointment. However, disappointment scored higher on "attending" than did regret, implying that after an experience of disappointment people pay more attention, observe more closely, or try to understand more, than after an experience of regret.

Additional insight into the experience of regret comes from studies by Gilovich and Medvec (1994, study 2) and by Roseman et al. (1994). Gilovich and Medvec asked respondents to write down their "biggest regrets". Less than 5% of the reported regrets (10 out of 213) concerned things that were beyond the respondent's control, which led Gilovich and Medvec to conclude (p. 359) that "it thus seems that a sense of personal responsibility is central to the experience of regret".[1] Clearly, this conclusion is consistent with Frijda et al.'s (1989) finding that regret is associated with higher self-agency scores.

Roseman et al. (1994) have shown that emotions can be differentiated in terms of distinctive *feelings*, *thoughts*, *action tendencies*, *actions*, and *emotivational goals*.[2] All five response types are assumed to be part of an emotional experience (see also Frijda, 1987; Plutchik, 1980; Roseman, 1984). Participants in Roseman et al.'s study were asked to recall an experience of one of 10 negative emotions.[3] These included regret but, unfortunately for present purposes, not disappointment. After recalling the experience, participants answered closed-ended questions concerning what they felt, thought, felt like doing, did, and wanted to do during this

[1] Note that some theorists have argued that regret and responsibility are not related (Landman, 1993; Rorty, 1980; Solomon, 1976; but see Sugden, 1985). The philosopher Taylor (1985, p. 98) argued that "regret but not remorse can be felt about an event for which the agent does not take herself to be even just causally responsible". The relation between regret and responsibility as stated by these theorists is based on logic and introspection, rather than empirical investigation.

[2] "Emotivations" (or "emotional motives"), is a term proposed by Roseman (1984) to describe the distinct motives or goals that accompany discrete emotions. Emotivations are different from action tendencies in that the latter term refers to specific behavioural responses, whereas the former refers to desired goal states.

[3] In the Roseman et al. (1994) study, participants were asked to recall two emotions, and answer questions about both. In order to overcome order effects, only the first emotion recalled was analysed. Because participants knew from the beginning of the study that they would be recalling two emotions, it is possible that they overemphasised the differences between the two (cf. Roseman et al., 1994). By using a full between-subjects design we overcome this possible shortcoming.

experience. There were two questions per response type for each of the 10 emotions. Regret was differentiated from other emotions on the basis of several characteristics. Regret was associated with having a sinking feeling, thinking about what a mistake one has made and about a lost opportunity, feeling the tendency to kick oneself and to correct one's mistake, actually doing something differently, and wanting to have a second chance and to improve one's performance. Hence, we conclude that the experience of regret involves a focus on the self as a cause of the event, and on possibilities for undoing the regret by changing the unfavourable outcome or by improving future performance.

Less is known about the experiential content of disappointment. However, if we accept the idea that disappointment arises from realising that the outcome of a choice would have been better had something else occurred, we can infer that it is often caused by external events. Hence, a feeling of disappointment may give people the feeling that they are not always able to control their own destiny, and that they perceive a lack of control. Moreover, and in contrast to the experience of regret, one should feel less responsible for causing the event. A consequence of being out of control is that people become inactive, or focus their attention on unrelated things (Seligman, 1975).

In sum, we predict that regret and disappointment differ in experiential content. If participants are asked to report on autobiographic al episodes of intense regret or disappointment, differences will be found that are consistent with two notions: Regret is felt when one feels responsibility for an unwanted outcome, and disappointment is felt when outcomes fail to live up to expectations. In the present study we test these predictions using a procedure closely based on the one used by Roseman et al. (1994).

METHOD

Participants and Design

First-year psychology students at the University of Amsterdam ($N = 313$; 109 males, 204 females; ages ranged from 18 to 46, with a median of 20 years) participated in partial fulfilment of a course requirement. The study was administered as a part of a package of paper-and-pencil tests. It had a two-group (Regret vs. Disappointment) design. There were 149 participants in the regret condition, and 164 participants in the disappointment condition.

Procedure and Materials

Booklets containing the questionnaires were randomly distributed among the participants. Participants were asked to recall vividly an occasion in which they felt either intense regret or intense disappointment. The complete instruction to participants in the regret [disappointment] condition was as follows (translated from the original Dutch):

> We are interested in the experience of emotional events that are important to people. You are asked to recall an event in which you experienced intense regret [disappointment]. Try to recall an experience of regret [disappointment] that is as authentic as possible, and try to immerse yourself as much as possible in the feelings you had at that moment. You will succeed best by going through the event once more step by step, thinking of the characteristics of the event and how you reacted emotionally to it. Imagine that you have to give someone a rich description of the event. Think of the feelings and thoughts you experienced during this event and your reactions to the event. [*pause*] Now we are going to ask you some specific questions about your experience of regret [disappointment].

Following this instruction we asked participants about their *feelings*, *thoughts*, *action tendencies*, *actions*, and *emotivational goals*. Each of these five response types was assessed by means of four items. These items took the form of statements about their experience of the emotion recalled. Two items were intended to measure responses typical of regret, the majority being items adopted from Roseman et al. (1994). The other two items in each 4-item set were intended to measure responses typical of disappointment. More specifically, respondents were asked: "When you felt regret [disappointment], to what extent did you . . . ", followed by the items shown in Table 1. Participants could answer on a 9-point scale, with end-points labelled *not at all* (1) and *to a very great extent* (9). We expected that the regret participants would score higher on the regret items, and that the disappointment participants would score higher on the disappointment items.

RESULTS

Table 1 depicts the mean scores on the 20 response items. A MANOVA with condition (Regret vs. Disappointment) as the independent variable, and the response items as dependent variables revealed a significant multivariate difference between the two conditions [$F(20, 292) = 7.83$, $P <$

TABLE 1
Means for Each Response Item per Emotion Recalled

Response Type and Item	*Regret*	*Disappointment*	*F*(1,311)	*P*
Feelings				
1. Feel a sinking feeling?	**5.38**	**5.59**	**0.56**	**n.s.**
2. Feel powerless?	5.84	7.08	26.53	.001
3. Feel that you should have known better?	**7.32**	**5.75**	**41.41**	**.001**
4. Feel that you lost control?	5.97	6.27	1.35	n.s.
Thoughts				
1. Think about what a mistake you made?	**7.09**	**5.51**	**34.84**	**.001**
2. Think about what you missed out on?	5.85	6.38	3.44	n.s.
3. Think about a lost opportunity?	**5.81**	**6.01**	**0.45**	**n.s.**
4. Think about how bad things could get?	5.01	5.23	0.61	n.s.
Action Tendencies				
1. Feel the tendency to kick yourself?	**7.11**	**5.16**	**56.90**	**.001**
2. Feel the tendency to get away from the situation?	5.47	6.16	6.11	.014
3. Feel the tendency to correct your mistake?	**6.80**	**4.89**	**42.71**	**.001**
4. Feel the tendency to do nothing?	3.36	4.14	8.56	.004
Actions				
1. Do something differently?	**5.42**	**5.86**	**3.20**	**n.s.**
2. Turn away from the event?	4.54	5.23	6.34	.012
3. Change the situation?	**5.82**	**5.64**	**0.48**	**n.s.**
4. Become inactive?	3.75	4.05	1.36	n.s.
Emotivational Goals				
1. Want to undo the event?	**7.71**	**6.89**	**12.44**	**.001**
2. Want to be far away from what happened?	5.77	6.20	2.28	n.s.
3. Want to get a second chance?	**7.57**	**6.77**	**10.73**	**.001**
4. Want to do nothing?	2.97	3.63	8.16	.005

Note: **Boldface** printed response items were intended to measure the experience of regret, the remaining items were intended to measure disappointment. Entries are answers to the questions: "When you felt regret [disappointment], to what extent did you feel/think/feel the tendency/did/want", followed by a response item. Participants could answer on a 9-point scale, with end-points labelled *not at all* (1) and *to a very great extent* (9). Two-tailed probabilities are only provided when $P < .05$.

.0001].[4] Univariate one-way ANOVAs showed that a significant difference existed for 11 of the 20 response items, most of them within the response types emotivations and action tendencies.[5] All significant differences were in the predicted direction (i.e. regret participants scored higher on the regret items and disappointment participants scored higher on the disappointment items).

DISCUSSION

The findings show that regret and disappointment differ in experiential content. Using a procedure closely based on that used by Roseman et al. (1994), we found that regret and disappointment can be distinguished with respect to the feelings, thoughts, action tendencies, actions, and emotivational goals that comprise the two emotions. The differences were most pronounced for action tendencies and emotivational goals, which suggests that the two emotions differ most markedly with respect to their implications for future behaviour.

On the basis of our findings, the *experience of regret* can be differentiated from that of disappointment in that the former involves feeling more intensely that one should have known better, thinking about what a mistake one has made, feeling a tendency to kick oneself and to correct one's mistake, and wanting to undo the event and to get a second chance.

It is interesting to note that some of the response items that were characteristic of regret in Roseman et al.'s (1994) study *did not* differentiate between regret and disappointment in our study, these being: having a sinking feeling, thinking about a lost opportunity, and doing something differently. This discrepancy is probably attributable to the fact that regret and disappointment are more similar to each other than are regret and the other emotions included in Roseman et al.'s study. It is also worth noting that two of the three items that we added to those used by Roseman et al. *did* distinguish between the two emotions. As stated earlier, participants

[4] A discriminant function analysis showed a similar pattern of results. It also showed that 83.2% of the participants in the regret condition, and 76.2% participants in the disappointment condition, could be classified correctly based on their scores on the response items (overall, 79.55% correctly classified).

[5] The reader may worry about inflated Type 1 error as a result of using 20 univariate tests. However, the risk of Type 1 error is limited because the univariate tests were two-tailed, although the strong predictions for the direction of the expected differences would also allow less conservative one-tailed testing. Nevertheless, we would like to point out that 2 out of the 11 significant results would not pass a one-tailed Bonferroni–Holm (cf. Holm, 1979) correction. These are the items: *Did you feel a tendency to get away from the situation?*, and *Did you turn away from the event?*

who experienced regret thought more about what a mistake they had made, and were more motivated to undo the event, by comparison with participants who experienced disappointment.

To summarise, the findings suggest that regret focuses attention on one's own role in the occurrence of a regretted outcome. It motivates one to think about how this event could have happened and how one could change it, or how one could prevent its future occurrence. These findings are consistent with the claim that regret, as well as being a rather unpleasant state, carries some clear benefits for the individual (cf. Landman, 1993).

Our findings concerning the *experience of disappointment* show that this experience, more than that of regret, involves feeling powerless, feeling a tendency to do nothing and to get away from the situation, actually turning away from the event, and wanting to do nothing. This suggests that the experience of disappointment can be more paralysing than that of regret. However, the findings also suggest that one can set aside an experience of disappointment more easily than one of regret. Where regretters ruminate and focus on past events, disappointed people may banish thoughts of disappointment from their minds and continue with their lives, thereby avoiding paralysis. Both interpretations may be valid. For example, a single experience of disappointment might be easy to live with, and might motivate one to do other things. A sequence of disappointing experiences, however, might be extremely paralysing because it can result in learned helplessness (Seligman, 1975).

Having established that regret and disappointment involve different experiences, we should acknowledge that the two emotions have much in common with each other. Both are related to decision-making and uncertain outcomes, and both originate in a comparison process in which the outcome obtained is compared to an outcome that might have occurred. This raises the question of how the two emotions are related to each other. Landman (1993, p. 56) has argued that "regret is a superordinate concept that subsumes certain defining features of disappointment''. We also favour the view that the two emotions are related to each other in a hierarchical manner, but we believe that the relation is the reverse of the one proposed by Landman.[6] We argue that disappointment is a more general reaction to an unexpected unfavourable outcome than is regret. Consistent with this reasoning is the finding that (Weiner et al., 1979, p. 1216), "certain emotions such as happiness and disappointment are independent of attributions but dependent on outcomes''. In order to experience regret, we suggest, one not only has to perceive the oucome as negative, but one also has to realise that the unwanted outcome resulted from (or could have

[6] We thank W. Gerrod Parrott for suggesting this relationship to us.

been prevented by) one's own behaviour. This suggests that disappointment is the more general emotion and that regret is experienced in cases where the disappointing outcome is attributed to the self. Although we cannot test this idea of a hierarchical relationship in our data, the fact that the findings were more robust for regret than for disappointment supports the idea that regret is a more specific emotion.

Our research supports the contention that regret and disappointment are different emotions, each with its characteristic phenomenological features. The present research also leads to some testable hypotheses about the differential effects of experienced regret and disappointment on future behavioural decisions. We expect, for example, that experienced regret results in more active attempts to undo the unpleasant effects of the decisions that went wrong, and in more elaborate information search for future decisions, in order to prevent more regret. This does not imply that experienced regret results in risk aversion, because both risky and safe choices can result in regret (cf. Zeelenberg et al., 1996). We expect that experienced disappointment will result in increased attention to other goals, and in a tendency to avoid future risk-taking. As we argued earlier, disappointment stems from disconfirmed expectancies. Avoiding future risk-taking is a strategy to avoid more disappointment. Opting for safe alternatives, leading to certain outcomes that are known in advance, does not carry the risk of disappointment because the outcomes are known. In these cases the outcome *is* the expectation. Outcomes of risky options are either below or above the expectation level, and can thus give rise to more disappointment. Research testing these predictions is needed because until now decision researchers' interest has been very much focused on the effects of anticipated emotions. That is, they showed that people's decisions are influenced by possible emotions that may occur as a consequence of that decision. The present research indicates, however, that this is only half of the story. As emotion researchers know, the emotions that we bring into a situation can also have a powerful impact on how we behave in that particular situation.

Manuscript received 20 March 1996
Revised manuscript received 1 May 1997

REFERENCES

Bell, D.E. (1982). Regret in decision making under uncertainty. *Operations Research, 30*, 961–981.

Bell, D.E. (1985). Disappointment in decision making under uncertainty. *Operations Research, 33*, 1–27.

Frijda, N.H. (1987). Emotion, cognitive structure, and action tendency. *Cognition and Emotion, 1*, 115–143.

Frijda, N.H., Kuipers, P., & ter Schure, E. (1989). Relations among emotion, appraisal and emotional action readiness. *Journal of Personality and Social Psychology*, *57*, 212–228.

Gilovich, T., & Medvec, V.H. (1994). The temporal pattern to the experience of regret. *Journal of Personality and Social Psychology*, *67*, 357–365.

Gilovich, T., & Medvec, V.H. (1995). The experience of regret: What, when and why. *Psychological Review*, *102*, 379–395.

Holm, S. (1979). A simple sequentially rejective test procedure. *Scandinavian Journal of Statistics*, *6*, 65–70.

Kelsey, D., & Schepanski, A. (1991). Regret and disappointment in taxpayer reporting decisions: An experimental study. *Journal of Behavioral Decision Making*, *4*, 33–53.

Landman, J. (1993). *Regret: The persistence of the possible*. New York: Oxford University Press.

Loomes, G., & Sugden, R. (1982). Regret theory: An alternative theory of rational choice under uncertainty. *Economic Journal*, *92*, 805–824.

Loomes, G., & Sugden, R. (1986). Disappointment and dynamic inconsistency in choice under uncertainty. *Review of Economic Studies*, *53*, 271–282.

Plutchik, R. (1980). *Emotion: A psychoevolutionary synthesis*. New York: Harper & Row.

Rorty, A.O. (1980). Agent regret. In A.O. Rorty (Ed.), *Explaining emotions* (pp. 489–506). Berkeley, CA: University of California Press.

Roseman, I.J. (1984). Cognitive determinants of emotions: A structural theory. In P. Shaver (Ed.), *Review of personality and social psychology* (Vol. 5, pp. 11–36). Beverly Hills, CA: Sage.

Roseman, I.J., Wiest, C., & Swartz, T.S. (1994). Phenomenology, behaviors, and goals differentiate discrete emotions. *Journal of Personality and Social Psychology*, *67*, 206–211.

Seligman, M.E.P. (1975). *Helplessness: On depression, development, and death*. San Francisco, CA: W.H. Freeman.

Shimanoff, S.B. (1994). Commonly named emotions in everyday conversations. *Perceptual and Motor Skills*, *58*, 514.

Solomon, R.C. (1976). *The passions*. Notre Dame, IN: University of Notre Dame Press.

Sugden, R. (1985). Regret, recrimination and rationality. *Theory and Decision*, *19*, 77–99.

Taylor, G. (1985). *Pride, shame and guilt: Emotions of self-assessment*. New York: Oxford University Press.

van Dijk, W.W., & van der Pligt, J. (1997). The impact of probability and magnitude of outcome on disappointment and elation. *Organizational Behavior and Human Decision Processes*, *69*, 277–284.

Weiner, B., Russel, D., & Lerman, D. (1979). The cognition-emotion process in achievement-related contexts. *Journal of Personality and Social Psychology*, *37*, 1211–1220.

Zeelenberg, M. (1996). *On the importance of what might have been: Psychological perspectives on regret and decision making*. Doctoral dissertation: University of Amsterdam.

Zeelenberg, M., Beattie, J., van der Pligt, J., & de Vries, N.K. (1996). Consequences of regret aversion: Effects of expected feedback on risky decision making. *Organizational Behavior and Human Decision Processes*, *65*, 148–158.